

Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
 B.Tech examinations (S) September 2020 S1/S2 (2015 Scheme)

**Course Code: CE100****Course Name: BASICS OF CIVIL ENGINEERING**

Max. Marks: 100

Duration: 3 Hours

**PART A***Answer all questions, each carries 3 marks.*

- |    |   | Marks |
|----|---|-------|
| 1  | Write short note on NBC.  | (3)   |
| 2  | “Orientation is an essential step while planning a building”. Comment | (3)   |
| 3  | Define datum, line of collimation and benchmark.                      | (3)   |
| 4  | What are the characteristics of a good brick?                         | (3)   |
| 5  | Define bearing capacity.  | (3)   |
| 6  | What are the requirements of an ideal roof?                           | (3)   |
| 7  | What are the ingredients of paint?                                    | (3)   |
| 8  | Differentiate between ramps and escalators.                           | (3)   |
| 9  | What are the limitations of an intelligent building?                  | (3)   |
| 10 | What are functions of chimneys?                                       | (3)   |

**PART B***Answer any eight questions, each carries 6 marks.*

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|----|--|-----|
| 11 | “Infrastructural developments have a deep impact on a country’s economic growth and a Civil Engineer thus plays an important role in the development of a country.” Substantiate the statement from what you have learnt in the subject. | (6) |
| 12 | What are the important aspects of a site to be considered for constructing a residential building?   | (6) |
| 13 | What are the functions of doors and windows in a building? List out the factors to be considered for the positioning of these.   | (6) |
| 14 | Explain the need and types of open space requirement for a building  | (6) |
| 15 | Define (a) Plinth area (b) Carpet area (c) FAR.  | (6) |
| 16 | What are the instruments used for horizontal measurements? Explain.  | (6) |
| 17 | List out the classification of surveying. Explain any two.   | (6) |
| 18 | The following consecutive readings were taken with a dumpy level. 1.895, 1.500, 1.865, 2.570, 2.990, 2.020, 2.410, 2.520, 2.960. The level was shifted   | (6) |

after fourth and sixth readings. The reduced level of first point was 30.500. Rule out a page of field book and record the readings. Use Height of Instrument method to find the reduced levels of all points and apply the usual checks.

- 19 Enlist the various types of cement. Explain any two. (6)
- 20 What are the constituents of concrete? Explain the uses of concrete? (6)

**PART C**

*Answer any two questions, each carries 11 marks.*

- 21 a) Draw a neat sketch of the plan and elevation of 1 brick thick English bond. (6)
- b) Explain the classification of deep foundations through sketches. (5)
- 22 a) Explain the types of pitched roof. (6)
- b) Explain the procedure for the surface preparation of painting on new iron and steel work. (5)
- 23 a) What are the various types of air conditioning systems? Explain. (6)
- b) List down the various types of towers and explain any two. (5)

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